WHAT IS CLAIMED IS:

1. A semiconductor mechanical sensor comprising:

a semiconductor substrate;

a beam structure extending in spaced relation over said semiconductor substrate;

a weight connected to said beam structure and including a first mechanical force detect electrode, said weight being movable along a predetermined direction;

a second mechanical force detect electrode facing said first mechanical force detect electrode of said weight;

an oscillation member for oscillating said weight; and

a sense electrode detecting oscillation of said weight for feedback control of oscillation of said weight;

wherein movement of said weight produces a change in capacitance between said first mechanical force detect electrode and said second mechanical force detect electrode to enable said sensor to detect mechanical forces acting thereon.

2. A semiconductor mechanical sensor in accordance with claim 1, wherein said oscillation member includes a third electrode and a fourth electrode, said third electrode being formed on said weight and said fourth electrode facing said third electrode.

3. A semiconductor mechanical sensor in accordance with claim 1, which is adapted to be used as a yaw rate sensor.

4. A semiconductor mechanical sensor in accordance with claim 2, wherein said sense electrode and said fourth electrode are formed on the same plane.

5. A semiconductor mechanical sensor in accordance with claim 1, wherein said oscillation member oscillates said weight in a direction generally perpendicular to said predetermined direction.